

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant:	Kwan-Ho Chan)	
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Serial No.:	10/680,079)	
)	Group Art
Filed:	October 7, 2003)	Unit: 3731
)	
For:	SURGICAL REPAIR KIT AND ITS METHOD OF USE)	
)	
Examiner:	Julian W. Woo)	

APPELLANTS' REPLY BRIEF UNDER 37 CFR § 41.41

Mail Stop Appeal Brief
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is a Reply Brief in response to the Examiner's Answer mailed on December 7, 2007.

I. Status of Claims

The present application was filed with 35 claims. Claims 36-41 were added by amendment. Claims 1-7, 9-16, 18, 22, 24-30, 33-35, and 37 have been previously canceled. Claims 8, 17, 19-21, 23, 40 and 41 are cancelled in a concurrently filed amendment. Claims 31, 32, 36, 38 and 39 are pending, rejected, and under appeal.

II. Grounds of Objection/Rejection to be Reviewed on Appeal

A. The rejection of claim 36 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 3,840,017 to Violante.

B. The rejection of claims 31 and 38-39 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 3,840,017 to Violante in view of U.S. Patent 5,681,333 to Burkhart et al.

C. The rejection of claim 32 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 3,840,017 to Violante in view of U.S. Patent 5,681,333 to Burkhart et al. and in further view of U.S. Patent 5,330,488 to Goldrath.

III. Argument

A. Rejection under 35 U.S.C. §102(b) to Violante

Claim 36

Claim 36 stands rejected under 35 U.S.C. §102(b) as being anticipated by Violante. Applicant maintains that Violante does not disclose the apparatus recited in claim 36, because Violante does not disclose a suture passer comprising a cannula “...wherein at least a portion of the distal end of said cannula is configured to drive a suture against tissue without severing the suture.” In contrast, the only mention of a distal cannula tip found in Violante discloses “It will be particularly noted that the surgical needle 20 has a beveled and sharpened tip 42 which assists in penetration of the skin, muscle and other tissue and at the same time presents a sharpened edge which the surgeon can employ in cutting of the suture material.” *Violante, column 2, lines 27-32*. Violante particularly points out that the tip is beveled and sharpened, and has a sharpened edge specifically suited for cutting suture material. Violante does not state or suggest that any part of the distal end of the needle is not sharp, or is adapted so as to not sever the suture.

The Examiner’s Answer, section 10 first paragraph, alleges that “...at least a portion of the tip can be deemed to be blunt or to possess a blunt heel”. There is no basis for such an opinion. Violante discloses no blunting of any part of the needle tip, instead disclosing that the tip 42 is “beveled and sharpened”.

Furthermore, the Examiner’s Answer, section 10 first paragraph, alleges that “...the leading end of the bevel forms a blunt, obtuse angle or heel with the side surface of the cannula.” This is also opinion, and cannot be correct because the inventor

described the needle as having a “sharpened tip” to “assist in penetration of the skin, muscle and other tissue” *Violante, column 2, lines 28-32*. If the leading edge of the bevel were blunt in relation with the side surface of the cannula, it would not be useful to penetrate skin, muscle or other tissue. Applicant would like to clarify that the phrase “beveled and sharpened tip”, as quoted in the Appeal Brief paragraph VII (A), is cited directly from the *Violante* disclosure, column 2, line 28. In the Examiner’s Answer, this phrase was incorrectly attributed to the Applicant.

The Examiner’s Answer, section 10 first paragraph also states that “[t]he point of the cannula tip in *Violante*’s device is configured for tissue penetration. Thus, there is little or no danger that a suture inserted through the use of the device of *Violante* would be severed during insertion.” Applicant acknowledges that a “beveled and sharpened tip” can penetrate tissue, but *Violante* also explicitly states that the “sharpened tip 42 . . . presents a sharpened edge which the surgeon can employ in cutting of the suture material.” *Violante, column 2, lines 28-31*. *Violante* does not disclose how the suture can be inserted through tissue without being severed by the sharpened edge.

In fact, *Violante* does not even indicate that the suture is to extend through the sharpened tip 42 during puncturing of the tissue. Given the presence of the sharpened edge on the tip 42, it may well be *Violante*’s intention that the working end of the suture be kept proximal to the tip 42 until after the tip 42 passes through the tissue. The suture could then be advanced through the tip 42 with the tip 42 in the body. *Violante* discloses no other method of passing the suture into the body. Thus, *Violante* clearly does not disclose a cannula with a distal end that is “configured to drive a suture against tissue,” as recited in Applicant’s claim 36.

B. Rejection under 35 U.S.C. 103(a) to Violante in view of Burkhart et al.

Claim 38

Claim 38 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Violante in view of Burkhart et al. Applicant maintains that claim 38 is not unpatentable over Violante in view of Burkhart et al., because it is not clear that Violante can be combined with Burkhart, and, even if they could somehow be combined, there is no teaching or suggestion that would motivate a person of skill in the art to make the combination.

In supplement to the arguments presented in the appeal brief in this regard, Applicant asserts that numerous modifications would have to be made to each device for the flexible wire loop 66 of Burkhart to be combined with the suture passer 10 of Violante. No motivation for or suggestion to make these modifications is identified by the Examiner. Regarding the suture passer 10, the spool 60 or reel 16 would have to be removed, leaving the suture passer 10 without a source of suture and therefore unsatisfactory for its intended use. The bore 22 and hollow needle 20 would have to be widened to accommodate the wire loop in addition to the suture.

Turning to the flexible wire loop 66, the rod 68 would have to be adjusted in length; if it were too short the rod 68 could not reach through the handle and hollow needle of the suture passer, and if it were too long the handle 72 of the wire loop 66 would dangle and possibly prematurely pull the loop 70 and suture proximally. If the wire loop 66 were to be used with the spool 60 or reel 16 in place, and fed only through the portion of the bore 22 distal to the recess 28, and the hollow needle 20, the handle 72 would have to be modified. Handle 72 is disclosed as cylindrical (*Burkhart column 5, line*

72), and the cylindrical shape would have to be drastically changed to fit into the recess 28 and be manipulable by the user's thumb. Unless modified, the cylindrical surface of the handle 72 would present only tangential contact with the recess 28. A surgeon trying to manipulate the wire loop 66 with the cylindrical handle 72 in the recess 28 would not have sufficient control to guide the loop 66. Given the magnitude of modifications required, it is improbable that one skilled in the art would contemplate, or be motivated to carry out, such numerous and severe modifications in order to combine the two references.

Applicant would like to remind the Board of the language quoted in the Appeal Brief from the U.S. Supreme Court's recent ruling in *KSR International Co. v. Teleflex Inc. et al.*, (Slip Opinion No. 04-1350). Specifically, "...claimed discoveries almost necessarily will be combinations of what, in some sense, is already known." Applicant agrees with the Court that the building blocks of every invention may include some elements already known. However, in the instant case, the number and magnitude of modifications that would be necessary to combine the two references to form Applicant's invention would require radical transformation of the two references, to the point that each would no longer be what is disclosed by its respective specification.

Claim 39

Claim 39 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Violante in view of Burkhardt et al. Applicant asserts that claim 39 is not unpatentable for the same reasons set forth above for claim 38, and for the reasons set forth in the Appeal Brief. The Examiner again has not identified the suggestion or motivation to combine the references, beyond citing the benefit of Applicant's inventive work.

Claim 31

Claim 31 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Violante in view of Burkhardt et al. Applicant asserts that claim 31 is not unpatentable, for the same reasons set forth above for claims 38 and 39. The Examiner again has not spelled out how the subject matter of the claim would be obvious to one of skill in the art, beyond citing the benefit of Applicant's inventive work.

C. Rejection under 35 U.S.C. 103(a) to Violante in view of Burkhardt et al. and in further view of Goldrath

Claim 32

Claim 32 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Violante in view of Burkhardt et al and in further view of Goldrath. Applicant asserts that claim 32 is not unpatentable, for arguments set forth above for claims 38 and 39 regarding the combination of Violante and Burkhardt et al., and for the reasons set forth in the Appeal Brief.

Conclusion

In conclusion, for the arguments of record and the reasons set forth above, all pending claims of the subject application continue to be in condition for allowance and Appellants seek the Board's concurrence at this time.

Dated this 28th day of January, 2008.

Respectfully submitted,

/David Meibos/

David W. Meibos
Attorney for Applicant
Registration No. 45,885

MedicineLodge, Inc.
180 South 600 West
Logan, UT 84321
Telephone: (435)774-1504
Facsimile: (435)753-7698